

ASSESSING DISTRIBUTED ENERGY RESOURCES FOR THE ENERGYNET

ABSTRACT OF THE DISCLOSURE

An improved method for analyzing power systems; in particular, power systems that may incorporate distributed energy resources (DER), that provides a thorough determination of the potential for network performance improvement that DER could provide, independent of non-network benefits DER could provide. The method incorporates an Energynet dataset simulating the power system, integrating transmission and distribution elements together and capable of evaluating the impacts of additions of real energy sources and/or reactive energy sources anywhere in the network. Such energy source additions are evaluated for their impact on a broad set of performance measures. The specific DER projects that would realize that potential improvement in network performance are characterized as an Optimal DER Portfolio. Network performance improvement attributable to the Optimal DER Portfolio is quantified in engineering and financial terms.